

smaller specimens; the transverse dark bands on the body and blotches along the median fins are faintly marked. The paddles of the ventral fins are tipped with blackish brown, and were edged with violet in the fresh specimen; the general colour of which was a faint pink, with yellowish tinge along the basal half of the dorsal and anal fins. The abdominal cone is bright silvery; it has no trace of a hind marginal membrane. The caudal is subtruncate; and, lastly, the cylindrical hyaline warts on the nape are very prominent and distinct.

I believe that *Eretmophorus* belongs to the GADIDÆ and approaches that section to which *Haloporphyrus* and *Physiculus* belong. I am, however, inclined to think that its nearest ally may be the strange pelagic Gadoid described a few years ago ('Naturalista Siciliano,' iii. pl. 2) by my friend Dr. L. Facciolá, from a single specimen got also at Messina, and named *Hypsirhynchus hepaticus*, Facc. Later two more specimens were got at Naples, and I have one. *Hypsirhynchus*, which deserves to be more fully described, has much the size and shape of *Eretmophorus*, but there is no abdominal cone and the ventrals have seven rays, some of which are slightly prolonged and end in a rounded head; but no fish that I know of possesses anything like the beautiful lanceolate ventral paddle-like blades of *Eretmophorus*.

EXPLANATION OF PLATE XXXIV.

- Fig. 1. Enlarged scales of *Eretmophorus kleinenbergi*.
 2. Younger specimen, natural size.
 3. Nearly adult specimen, slightly enlarged.
 4. Oldest or adult specimen, once and a half natural size.

2. On a Collection of Land-Shells made in Borneo by Mr. A. Everett, with Descriptions of supposed new Species. By Lieut.-Col. H. H. GODWIN-AUSTEN, F.R.S., F.Z.S., &c.—Part I. Cyclostomacæ.

[Received June 1, 1889.]

(Plates XXXV.—XXXIX.)

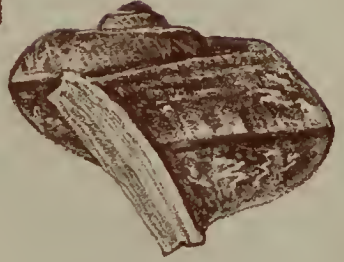
INTRODUCTION.

This truly fine collection was brought home in 1888 by Mr. A. Everett, and he very kindly let me see it, and handed it over to me for the identification of the species. In this work, which has been delayed from various causes, I have been assisted very materially by Dr. R. Hungerford, who had a better and previous knowledge of the shells from that part of the world, and had in his collection examples of a good many Bornean species obtained from Sir James Low, Mr. Boxall, and other sources. Mr. Edgar Smith has also given me much aid in looking over and comparing these shells with those in the British Museum collection, and to both my sincere thanks



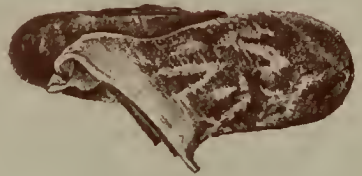
1a

1b



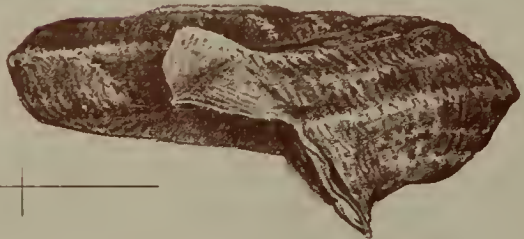
2

2a



3a

3



4a

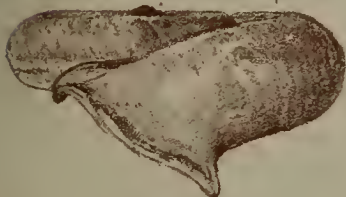
5a



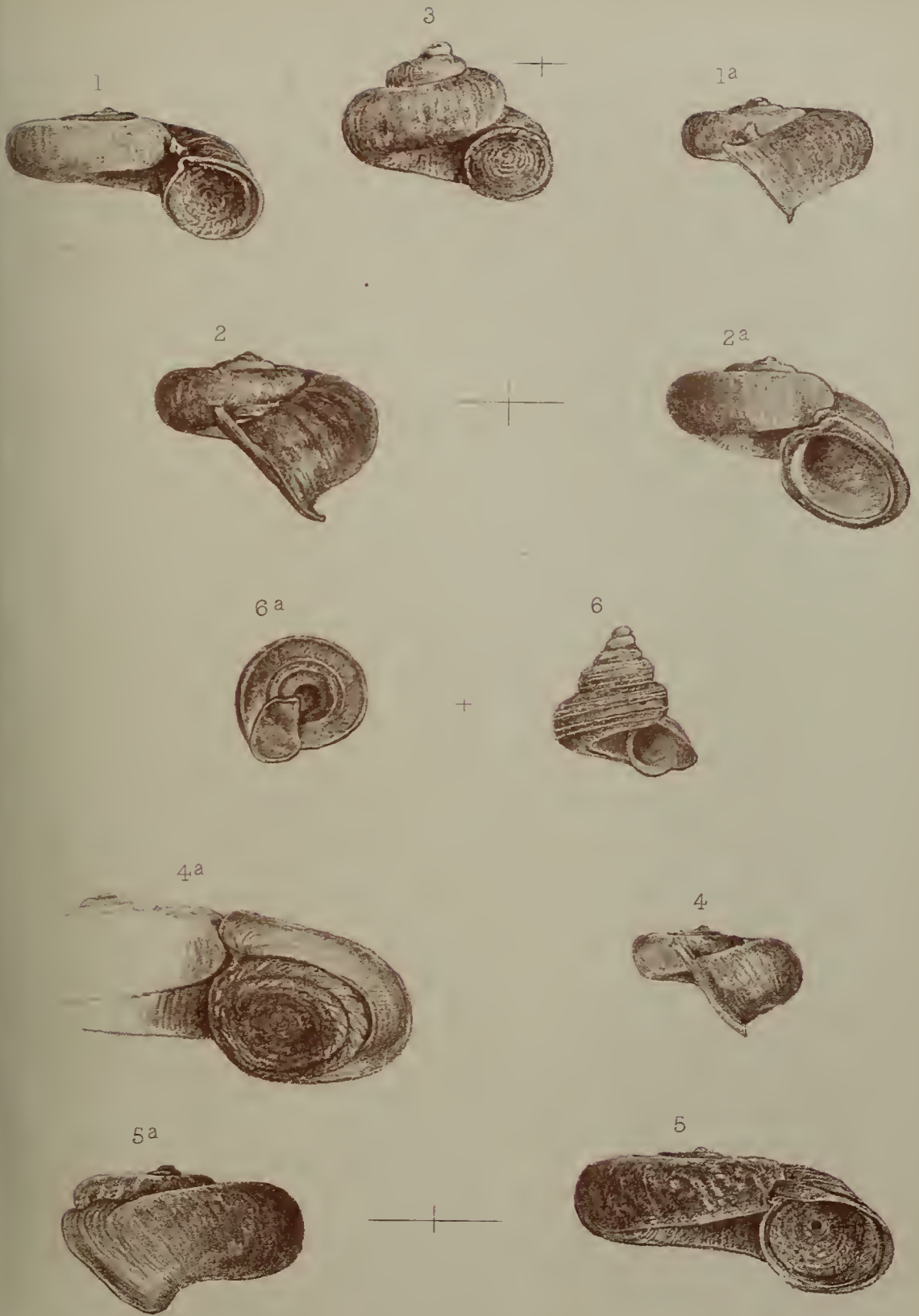
4

5b

5



NEW BORNEAN LANDSHELLS.



NEW BORNEAN. LANDSHELLS.



NEW BORNEAN LANDSHELLS.

1



3



4



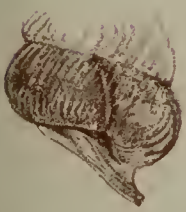
2



2a



5a



6a



5



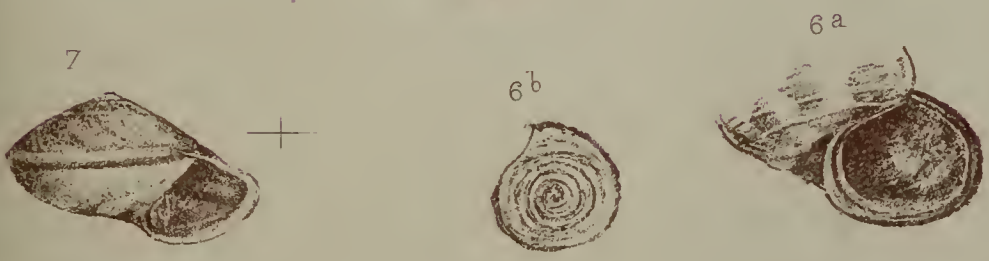
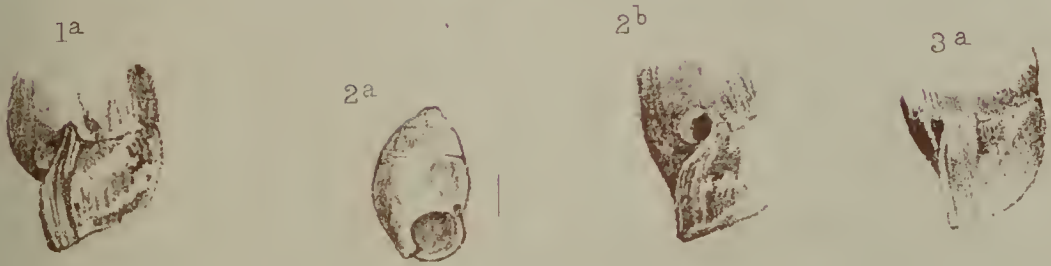
7



6



NEW BORNEAN LANDSHELLS



NEW BORNEAN LANDSHELLS.

are due. The excellent catalogue (with plates) of Bornean shells compiled by Signor A. Issel in 1874 from the collections brought together by Signor G. Doria and Signor O. Beccari has been of great use and forms the basis of my work. I include in this paper all the species not seen by me, but there enumerated, with the names printed in italics, so as to bring the record up to date. I have also included all the species mentioned as from Borneo in Tenison-Woods's "Malaysian Land and Freshwater Mollusca" (Proc. Linn. Soc. N. S. Wales, ser. 2, vol. ii. pp. 1003-1095)—an imperfect list as regards Borneo.

Some years ago I had placed in my hands by Mr. John Evans all the shells obtained by Mr. Everett when he was exploring the limestone caves in Borneo; these shells were all much weathered and in a very unsatisfactory state to name and describe, and it was desirable that a better knowledge of the living forms of Borneo should be first obtained before doing so. The specimens thus dug out of the floors of these caverns are now referred to in this paper.

Mr. Everett at my request preserved a good number of his land-shells in spirit, and I am thus enabled to describe the anatomy of some of the Zonatiidæ that I have had time to examine, which are of much interest. The greatest credit is due to Mr. Everett for adding so largely to our knowledge of the Molluscan Fauna of Borneo, for his labours have furnished us in this first part alone with no less than 34 new species, besides a very large number of other shells obtained by previous naturalists and collectors, some of which were rare and little known. Mr. Everett is returning to Borneo, and with this excellent commencement and foundation for future exploration will no doubt add many more to the novel and extremely interesting set of shells he has already discovered there.

He has written me the following short description of the country, which gives an idea of its physical features. The accounts of the same district in the Journals of Rajah Sir James Brooke also indicate that it is a sort of paradise for land-shells, where numberless new species are yet to be found with proper search at the proper season, and when the hill-ranges are thoroughly explored.

"The 'plain' at Labuan is simply an open grassy space bordering on Victoria Harbour and representing the original clearing of the settlement. It is composed partly of sea-sand and partly of old mangrove-mud and is intersected by ditches, which are often quite dry in the fine season, and in the rainy season are alternately filled with rain-water and with brackish or even purely salt-water according to the state of the tides. The plain seems to have been originally swampy and covered with mangroves and white Casuarines on the sandy portions. The Busan Hills are situated perhaps a dozen miles from the sea as the crow flies, between Tegora and Kuching in Sarawak. They attain an elevation of about 500 feet, and are covered with old forest and the usual lower undergrowth, except where the scarps are too steep to admit of the lodgment of soil or of decaying vegetation. The rock is compact limestone, the surface of which is much fretted by the action of the rains, and where not exposed to direct sunlight is usually covered to a greater or less degree with a variety of mosses.

There is everywhere on the ground and filling the hollows among the rocks a mass of decaying forest leaves. The Niah Hills are exactly similar in general character, but they are from 1000 to 1500 ft. in height. No shells have been collected anywhere in Borneo above 500 ft., except those lately obtained by Mr. Whitehead on Kina Balu and a few collected by Mr. Boxall on Molu, at any rate in N.W. Borneo. I may mention that Belidah and the Sinianan River are both close to Busan."

Owing to the number of species in this collection which have to be identified, and to the number that I have had to figure, I have thought it best, as my leisure time is limited, to submit my account of it to the Society in two parts. The first of these contains the Cyclostomaceæ, the second will include the Helicacea (amongst which are a number of very fine new species) and the freshwater and brackish water forms.

CYCLOPHORUS, Montf.

1. CYCLOPHORUS BORNEENSIS, Metcalfe.

Cyclostoma borneensis, Metcalfe, P. Z. S. 1851, p. 71; Mart. u. Chem. Conch.-Cab. ed. ii. p. 362, pl. xlvii. figs. 1-3; Reeve, Conch. Icon. pl. xii. fig. 50 (1861); von Martens, Preuss. Exped. Ost-Asien, Die Landschnecken, p. 136, pl. iii. figs. 5, 6 (1867).

Cyclostoma subinvolutus, Eydoux et Souleyet, Voy. Bonite, Zool. ii. p. 534, pl. xxx. figs. 22-24.

Hab. Niah Hills, Trusan, Labuan (*A. Everett*).

2. CYCLOPHORUS NIAHENSIS, n. sp. (Plate XXXV. figs. 1, 1a, 1b.)

Shell dextral, depressedly turbinate, widely umbilicated, subangulate; sculpture, the $2\frac{1}{2}$ apical whorls are finely costulate, the anterior portion is longitudinally striate; colour dark ruddy brown, with a few rather close zigzag spots on upper surface, longitudinally striate below, a pale band on the periphery; spire moderately high; apex blunt; suture excavated; whorls 4, the last having a well-marked subangulate ridge running with the suture, producing a canal-like depression; aperture circular, subvertical; peristome pale-coloured, double, thickened, the inner continued forward for 5 millim.; columellar margin rounded.

Size: maj. diam. 44.0, alt. axis 15.5 millim.

Hab. Niah Hills.

3. CYCLOPHORUS TENEBRICOSUS, Adams & Reeve.

Cyclostoma tenebricosus, Adams and Reeve, Zool. Voy. Samarang, Moll. p. 57, pl. xiv. fig. 6 (1850); Mart. u. Chem. Conch.-Cab. ed. ii. p. 250, pl. xxxiii. figs. 12, 13.

Leptopoma tenebricosum, Reeve, Conch. Icon. pl. vii. fig. 44 (1862).

4. CYCLOPHORUS COCHRANEI, n. sp.

Shell turbinate, solid, keeled, narrowly umbilicated, the umbilicus very nearly concealed by the columellar margin; sculpture a smooth

surface with ordinary lines of growth; colour a pale ochre ground, mottled somewhat sparsely with dark liver-brown, below the keel with stronger zigzag blotchings; spire conoid, rather high; apex subacute; suture shallow; whorls 5, the last flattened on the side; aperture circular, suboblique; peristome continuous, simple, slightly reflected, sinuate below the columellar margin and with a slight thickening there.

Size: maj. diam. 41, min. 32·5; alt. axis 18·0 millim.

Hab. Busan and Niah Hills (*A. Everett*).

There are three specimens in the collection, one being from the Niah Hills.

I have named this fine species after Rear-Admiral Sir Thomas Cochrane, who commanded the combined squadron in the Bornean waters in 1846, which captured Bruné and destroyed that piratical stronghold.

1870 4 a. *CYCLOPHORUS COCHRANEI*, var. *OCHRACEUS*. 137, 1953

In this variety from the Busan Hills the only difference observable in the form of the shell is its deeper suture. It has no markings of any kind, the whole surface being of a dark straw or ochre colour. There are two specimens, and as they are from the same hills I do not think they can be separated from the species above described.

Dec 1953 5. *CYCLOPHORUS TALBOTI*, n. sp.

Shell turbinate, subangulate; umbilicated, but umbilicus nearly hidden by the reflection of the columellar margin of the aperture; colour rich madder-brown, paler around the umbilicus, in one specimen a dark band below the periphery, speckled with white and with a regular series of pale whitish ochre spots following the suture, a line of similar smaller spots on the keel; spire conic; apex subacute; suture moderately impressed; whorls 5, convex; aperture circular, oblique; peristome solid, simple, slightly reflected, very sharply so on the columellar margin.

Size: maj. diam. 40, min. 22·5; alt. axis 17·0; diam. body-whorl 23·25 millim.

Hab. Busan Hills (*A. Everett*).

This species is allied to *C. borneensis*, but is not so openly umbilicated or so sharply keeled, and the apical whorls increase in size more rapidly; the coloration is much darker and more attractive. I have named it after Captain Talbot, who commanded H.M.S. 'Vixen,' and in 1845 defeated and took the stronghold of Sheriff Osman in the Mulludu river.

1871 1953 6. *CYCLOPHORUS PHLEGETHON*, n. sp.

Shell depressedly turbinate, subangulate on periphery, openly and widely umbilicated; sculpture a smooth surface; colour a rich dark madder-brown, crossed by fine zigzag continuous pale lines; spire low; apex blunt and rounded; suture impressed; whorls 4, at apex closely wound, and increasing rapidly after $2\frac{1}{2}$ have been formed; aperture circular, suboblique; peristome simple, slightly reflected.

Size: maj. diam. 39, min. 20; alt. axis 13.5; body-whorl alt. 18.25 millim.

Hab. Molu Hills (*Mr. Hose*; coll. *Hungerford*).

Only one specimen. This is the most distinct species as compared with *C. borneensis* that I have yet had to describe. I have named it after the H.E.I. Co.'s steamer, which was with the fleet under Rear-Admiral Sir T. Cochrane.

LEPTOPOMA, Blanf.

7. LEPTOPOMA BICOLOR, Pfr.

Cyclostoma bicolor, Pfr. P. Z. S. 1852, p. 145, pl. xiii. fig. 9; Mart. u. Chem. Conch.-Cab. ed. ii. p. 374, pl. xlvi. figs. 25-27.

Leptopoma bicolor, Reeve, Conch. Icon. pl. ii. fig. 13 (1862).

Hab. Unknown. In British Museum. Borneo according to Pfeiffer.

8. LEPTOPOMA LOWI, Pfr.

Leptopoma lowi, Pfr. P. Z. S. 1853, p. 70; Reeve, Conch. Icon. pl. vii. fig. 38.

Hab. Dahat Island (*Everett*); Labuan (*Low*).

8 a. *Leptopoma signatum*, Pfr.

Cyclostoma (Leptopoma) signatum, Pfr. P. Z. S. 1856, p. 338.

Leptopoma signatum, Reeve, Conch. Icon. pl. vii. fig. 40.

Hab. Borneo? (*Pfr.*).

In British Museum collection.

9. LEPTOPOMA SERICATUM, Pfr.

Cyclostoma (Leptopoma) sericatum, Pfr. P. Z. S. 1851, p. 244.

Leptopoma sericatum, Reeve, Conch. Icon. pl. v. fig. 26.

Hab. Usukan Island, Niah Hills, Sarawak, Busan Hills, Low Island, Tiga and Karamon Island (*Everett*).

As Issel points out, the varieties of this species are numerous; he gives five, but I observe a certain constancy in those from different localities.

In the collection before me there are 96 from Tiga Island, 84 of which are quite white, with numerous fine very pale grey bands, var. E of Issel; in 12 the shell has a general pale brown appearance, from the bands being darker and crossed by transverse lines of the same colour, near var. B of Issel.

From Karamon Island there are 3 specimens similar to var. B.

From the Niah Hills 76 specimens are sent; in all, more or less, the banding is conspicuously marked, and in 68 the bands are narrow and regular, var. B; 3 are like var. D of Issel (Moll. Born. pl. vi. fig. 12), with one broad band on the periphery; while 5 are violet-brown, the spiral ribbing strong, near var. A of Issel.

From Sarawak proper, 8 specimens present a violet tinge, are

plain, the banding obsolete, and one is ornamented with a single dark narrow band on the periphery.

Another box from Sarawak contains 13 specimens; 2 are large, of the violet-tinted variety, the rest are small in size; 8 have a greenish tint and finely banded olivaceous, 2 are quite white with violet apex, 1 has a single very broad dark band.

From the Busau Hills 7 are similar to those from Sarawak, last mentioned, greenish tinted.

Four came from Usukan; 2 are like var. B from Tiga Island, but smaller; 2 are exactly like var. C of Issel (pl. vi. fig. 10).

From Low Island, Mantanani group, the form differs most, having no raised spiral ribbing, rather large in size, delicate, thin, pale, transparent shells; var. E of Issel.

B. G. 9 a. *LEPTOPOMA WALLACEI*, Pfr.

Compared with the example in the British Museum.

This banded species occurs in Dr. Hungerford's collection. It is only a variety of *L. sericatum*, with a broad band above the periphery; other shells may be picked out with the band below it.

B. G. 10. *LEPTOPOMA UNDATUM*, Metcalfe.

Cyclostoma undatum, Metcalfe, P. Z. S. 1851, p. 71.

Leptopoma undatum, Reeve, Conch. Icon. pl. iv. fig. 21 (1862).

Hab. Sarawak (*Everett*).

Leptopoma bourguignati, Issel.

Leptopoma bourguignati, Issel, Moll. Born. Ann. Mus. Civ. Genova, p. 428, pl. vi. figs. 7, 8 (1874).

Hab. Sarawak, 2 examples (*Doria and Beccari*).

B. G. *Leptopoma subconicum*, Pfr.

Leptopoma subconicum, Bock, P. Z. S. 1881, p. 634.

Hab. Mindai (*Carl Bock*).

B. G. *Leptopoma massena*, Less.

Leptopoma massena, Bock, P. Z. S. 1881, p. 634.

Hab. Mindai (*Carl Bock*).

B. G. *Leptopoma duplicatum*, Pfr.

Leptopoma duplicatum, Bock, P. Z. S. 1881, p. 634.

Hab. Borneo (*Carl Bock*).

B. G. *Leptopoma whiteheadi*, E. A. Smith.

Leptopoma whiteheadi, E. A. Smith, Ann. & Mag. Nat. Hist. ser. 5, vol. xx. p. 133 (1887).

Hab. Northern Borneo (*Whitehead*).

LAGOCHEILUS, Blanf.

Although the notch at the sutural margin of the peristome is very small and less apparent than in the typical Indian species, yet it is there, and in all characters agrees with the genus *Lagocheilus* as described by W. T. Blanford.

11. LAGOCHEILUS DIDO, n. sp. (Plate XXXIX. fig. 5.)

Shell turbate, rather thin, umbilicated narrowly; sculpture covered with a stony epidermis, smooth, with a distinct rib on the periphery, extending on to the penultimate whorl; colour amber-brown; spire high, sides flat; apex pointed; suture impressed; whorls 6, moderately convex, the last subangulate, and angulate below round the umbilicus; aperture circular, subvertical; peristome double, with a slight sutural notch, the outer lip slightly expanded and reflected at right angles.

Size: maj. diam. 10·0; alt. axis 7·0; diam. apert. 5·5 millim.

Operculum not preserved in the only two specimens before me.

Hab. Niah Hills (*A. Everett*).

I have named this shell after H.M.S. 'Dido,' the officers and crew of which, on the first occupation of Sarawak by Rajah Brooke, did good service in the suppression of the pirates who then infested those waters.

12. LAGOCHEILUS KEPPEL, n. sp. (Plate XXXIX. fig. 4.)

Shell globosely turbate, rather solid, translucent, closely umbilicated; sculpture a thick epidermis set with very fine short hairs, 5 or 6 delicate longitudinal lirate ribs, crossed by regular diagonal raised striæ; colour dull ochraceous ochre, apex dark; spire high, sides flat; apex fine; suture moderately impressed; whorls $5\frac{1}{2}$, rounded; aperture circular, nearly vertical; peristome double, inner continues simple, with a very minute notch showing within the aperture; columellar margin rounded, the outer lip slightly reflected.

Size: maj. diam. 8·25, min. 6·75; alt. axis 6·0 millim.

Operculum thin, flat, transparent, spiral of about 8 turns.

Hab. Niah Hills (*A. Everett*).

This shell is named after Captain the Honourable Henry Keppel, of the 'Dido,' whose name occurs often in the early history of Sarawak and that part of Borneo.

1953 13. LAGOCHEILUS MUNDYANUS, n. sp. (Plate XXXIX. figs. 6, 6 a, 6 b.)

Shell dextral, moderately solid, conical, closely umbilicated; sculpture very minute transverse striæ, with at distant intervals a fine costulate rib, very conspicuous in the very young shells, becoming obliterated with age; four fine spiral liræ ornament the last whorl, with one below the periphery, very minute short hairs are given off from the points of intersection of the liræ bands and the transverse rib, but these are lost as the shell grows older; colour pale olivaceous, crossed by transverse bands of dark liver-

brown; spire conic; apex rather sharp; suture impressed; whorls 5, sides convex; aperture circular, milling white within; peristome indistinctly double, the outer lip slightly expanded, with a very small notch at the sutural margin; columellar margin rounded.

Size: maj. diam. 3·20; alt. axis 4·0 millim.

Operculum flat, thin, horny, transparent, multispiral.

Hab. Busan Hills (*A. Everett*).

CRASPEDOTROPIS, Blauf.

m 14. CRASPEDOTROPIS BARBATUS, Pfr.

Cyclostoma (Leptopoma) barbatum, Pfr. P. Z. S. 1855, p. 104.

Leptopoma barbatum, Reeve, Conch. Icon. pl. vii. fig. 42 (1862).

Hab. Niah Hills, Sarawak (*A. Everett*).

This is very close to *C. metcalfi*, Issel.

Craspedotropis bellulus, v. Martens.

Cyclophorus bellulus, v. Martens, Monatsber. d. Berlin. Akad. 1865, p. 52; Preuss. Exped. Ost-Asien, Die Lauschnecken, p. 104, pl. ii. fig. 18 (1867). *tu*

Hab. Near Bengkajang, Pandon Mountain.

Craspedotropis metcalfi, Issel.

Cyclophorus metcalfei, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 432, pl. vi. figs. 4-6 (1874).

1867. *Craspedotropis confluens*, Pfr.

Cyclophorus confluens, Pfr. P. Z. S. 1860, p. 140; Reeve, Conch. Icon. pl. xv. fig. 69 (1861).

PTEROCYCLOS, Benson.

1867. 15. PTEROCYCLOS LOWIANUS, Pfr.

Pterocyclos lowianus, Pfr. P. Z. S. 1863, p. 526.

In Dr. Hungerford's collection. Very similar to *Pt. tenuilabiatus*. This species has never been figured.

1867. 16. PTEROCYCLOS TENUILABIATUS. (Plate XXXV. figs. 4, 4a.)

Cyclostoma tenuilabiatum, Metcalfe, P. Z. S. 1851, p. 71.

Pterocyclos tenuilabiatus, Reeve, Conch. Icon. pl. i. fig. 5 (1863). *+*

Pterocyclos anomalus, Reeve, Conch. Icon. pl. v. fig. 27 (1863).

The type is in the British Museum.

17. PTEROCYCLOS SUMATRANUS, v. Martens.

Pterocyclos sumatranus, v. Martens, Monatsber. Berlin. Akad. 1864, p. 115; Preuss. Exp. Ost-Asien, Die Landschnecken, p. 115, pl. i. fig. 5 (1867).

Pterocyclos endædaleus, Crosse, Journ. de Conch. 1869, p. 187, et 1871, p. 67, pl. 1. fig. 2.

1867. 18. PTEROCYCLOS LABUANENSIS, Pfr.

Pterocyclos labuanensis, Pfr. P. Z. S. 1863, p. 525.

This species does not appear to have ever been figured.

19. *PTEROCYCLOS MINDAIENSIS*, Bock.

Pterocyclos mindaiensis, Bock, P. Z. S. 1881, p. 634.

Near *P. loweanus*, Pfr., but larger.

20. *PTEROCYCLOS NIAHENSIS*, n. sp. (Plate XXXV. figs. 3, 3 a.)

Shell dextral, discoid, very widely, perspectivevely umbilicated; sculpture a thick epidermis, crossed by stony lines of growth; colour umber-brown, with narrow zigzag markings crossing the whorls at regular intervals; apex not raised above the succeeding whorls; suture shallow; whorls 5, subangulate at the periphery, with a raised rib upon it, two similar less defined ribs above and three on the underside; aperture circular, very oblique; peristome double, inner continues simple, the outer much expanded and reflected, particularly on the upper margin, where it forms one strong sutural fold, which a very slight further development would convert into a tube, it then falls over in front forming a frontal lappet, with sinuate edge.

Size: maj. diam. 27·75, min. 23·0; alt. axis 5·5; body-whorl 11·5 millim.

Operculum dark brown, multispiral, with coarse raised edges in front, deeply concave below.

Hab. Niah Hills (*A. Everett*).

This species is very like *P. cucullus* at first sight, but its keeled and ribbed whorls and the very different form of the winged expansion of the peristome separate it.

A shell very similar occurs in the Molu Hills. It differs in three particulars, viz. in the form of the wing, being less developed into the tubular form; in the apical whorls being depressed below the succeeding whorls; in the coloration being of a darker tint with broader zigzag blotchings. This I distinguish as var. *depressus*. This shell was first found by Mr. Boxall and given to Dr. Hungerford, who presented a specimen to the British Museum, which I have seen.

21. *PTEROCYCLOS CUCULLUS*, n. sp. (Plate XXXV. figs. 2, 2 a.)

Shell dextral, flatly discoid, very amply and perspectivevely umbilicated; sculpture a thick epidermis with fine lines of growth; colour pale sienna, with broad flame-like zigzag markings crossing the whorls transversely; apex perfectly flat; suture impressed; whorls nearly 5, rounded, rather rapidly increasing; aperture oblique, circular; peristome double, the inner continuous, simple, the outer sharply reflected and increasing in breadth on the outer margin, and the upper, where it droops over into a cowl-like shape, having one single depression or fold.

Size: maj. diam. 26·0, min. 22·0; alt. axis 5·5; diam. ap. 8·5 millim.

Operculum very dark brown, multispiral, with raised edges.

Hab. Niah Hills.

Pterocyclos eudædalus, Crosse, Journ. Conch. xvii. 1869, p. 187.

Hab. Borneo.

Pterocyclos planorbulus, Lam. Encycl. Méth. pl. 461. fig. 3.

Hab. Borneo?

OPISTHOPORUS, Benson.

22. OPISTHOPORUS BICILIATUS, Mousson.

Pterocyclos biciliatus, Mousson, Moll. v. Java, p. 49, pl. xx. fig. 9; Reeve, Conch. Icon. pl. iv. fig. 17 (1863).

Cyclostoma taylorianum, Pfr. Zeitschr. f. Malak. 1851, p. 7; Mart. u. Chemn. Conch.-Cab. ed. ii. p. 288, pl. xxxviii. figs. 27-29.

Cyclostoma (Pterocyclos) charbonnieri, Récluz, Journ. de Conch. 1851, p. 214, pl. v. figs. 12, 13.

Cyclostomus spiniferum, Morelet, Journ. de Conch. 1861, p. 177.

Opisthoporus latistrigus, v. Martens.

Cyclotus latistrigus, v. Martens, Monatsber. d. Berlin. Acad. 1864, p. 116.

Opisthoporus euryomphalus, v. Martens (not Pfr.), Preuss. Exp. Ost-Asien, Die Landschnecken, p. 111, pl. l. fig. 6 (1867).

23. OPISTHOPORUS EURYOMPHALUS, Pfr.

Cyclostoma (Opisthoporus) euryomphalus, Pfr. P. Z. S. 1856, p. 337.

Pterocyclos euryomphalus, Reeve, Conch. Icon. pl. v. fig. 29 (1863).

Compared with type in Cuming Coll., Brit. Mus.

Opisthoporus pertusus?, Morelet.

Cyclostoma pertusum, Morelet, Journ. de Conch. ix. p. 177 (1861).

Cyclostoma spiniferum, Morelet, Journ. de Conch, ix. p. 177 (1861).

24. OPISTHOPORUS PTEROCYCLOIDES, Pfr. (Plate XXXV. figs. 5, 5 a, 5 b.)

Cyclostoma pterocycloides, Pfr. P. Z. S. 1854, p. 300.

Pterocyclos anomalus, Reeve, Conch. Icon. pl. v. fig. 27 (1863).

Var. quite plain.

Hab. Niah Hills (A. Everett).

25. OPISTHOPORUS BIROSTRIS, Pfr.

Cyclostoma birostre, Pfr. P. Z. S. 1854, p. 300.

This species is in Dr. Hungerford's collection: it does not appear to have been figured anywhere.

Opisthoporus rostellatus, Pfr.

Cyclostomus rostellatum, Pfr. Zeitschr. f. Malak. 1851, p. 8; Mart. u. Chemn. Conch.-Cab. p. 289, pl. xxxviii. figs. 30-34.

Pterocyclos rostellatus, Reeve, Conch. Icon. pl. v. fig. 25 (1863).

In Brit. Mus.

RHIOSTOMA, Benson.

26. RHIOSTOMA CAVERNÆ, n. sp. (Plate XXXVI. figs. 1, 1 a.)

Bor.

Shell dextral, discoid, rather solid, very widely and perspectively umbilicated; sculpture smooth, with fine transverse lines of growth; colour pale umber-brown; spire just raised above last whorl; apex flat; suture well impressed; whorls 4, well rounded, the last separated from the others for a distance of 4 millim., the sutural tube lying about midway, rather nearer to the aperture, it is short and recurved; aperture circular, oblique; peristome double, inner simple, continuous, the outer expanded on the exterior margin and into a very slight wing at the sutural side.

Size: maj. diam. 15.0, min. 10.5; alt. axis 3.25; diam. body-whorl 6.0 millim.

Operculum multispiral, shelly in front and slightly convex, double, horny, polished, multispiral at inner side.

Hab. Sarawak proper.

The first specimens sent home by Mr. Everett were four in number, obtained when making excavations in certain caves in the limestone formation, and marked Cave A. The specific name is only given in allusion to this work, not that the species habitually lives in such places. These are somewhat larger than the one described and figured, being in major diam. 19 millim., minor diam. 14 millim.

27. RHIOSTOMA GWENDOLENÆ, n. sp. (Plate XXXVI. figs. 2, 2 a.)

Bor.

Shell dextral, globosely discoid, solid, openly umbilicated; sculpture a thick finely striate epidermis; colour dark umber-brown, with transverse bands of a darker colour, towards the apex zigzag bars are seen where this epidermis has come off; spire low; apex papilli-form; suture well impressed; sutural tube 2 millim. in length, tapering and directed forward; whorls $4\frac{1}{4}$, rounded, the last separated from the other whorls from the base of sutural tube; aperture circular; peristome double, the inner lip thin and continuous, the outer expanded and reflected on the outer margin.

Size: maj. diam. 15.25, min. 11.75; alt. axis 5.0; diam. body-whorl 7.5 millim.

Operculum thin, flat, smooth, multispiral, and shelly in front, smooth and horny behind, with a central circular hole.

Hab. Niah Hills (*A. Everett*).

Only one specimen in the collection, which is quite distinct from all other species of this genus from Borneo in its more closely round and globose form.

28. RHIOSTOMA HUNGERFORDI, n. sp.

Bor.

Shell discoid, umbilicated; colour rich dark madder-brown, crossed with broad regular V-shaped markings for 4 whorls, where the varix of an old aperture is seen; in front of this the markings are less developed; spire perfectly flat; apex papillate, scarcely raised above the succeeding whorls; suture well impressed, the tube small, adhering

to the penultimate whole, curved downward and pointed; whorls 4, rounded, the last leaving the penultimate at the sutural tube 7 millim. from the aperture; peristome double, the outer thin and much expanded at right angles to the whorl.

Size: maj. diam. 23·0, min. 16·80; alt. axis 4·0; body-whorl alt. 9·5 millim.

Hab. Borneo (coll. *Hungerford*).

This shell is in Dr. Hungerford's collection and was sent to him from the Molu Hills by Mr. Boxall.

Bm. 29. *RHIOSTOMA IRIS*, n. sp.

Shell depressedly turbinate, openly and perspectively umbilicated; colour deep ochre, with regular zigzag bands of ruddy brown crossing the whorls; spire just raised above the last whorl; apex blunt; suture well impressed; whorls 4, rounded, the last separated from the penultimate for about 5 millim. from the aperture, where the sutural tube rises, this is short, horizontal, and directed forwards; aperture oblique; peristome double, continuous, inner simple, outer expanded at right angles to the body-whorl, more particularly on the outer margin, and increasing to a crinkled expansion or wing on the upper margin and directly in front of the sutural tube, this wing terminates abruptly on the columellar side.

Size: maj. diam. 18·25, min. 14·0; alt. axis 5·75 millim.

Operculum with a smooth central spot, multispiral, shelly, flatly concave.

Hab. Borneo (coll. *Hungerford*).

The exact locality where this shell was collected is not known to me, but it is distinct from all the other species with which I am acquainted.

CYCLOTUS, Swains.

Dr. Ed. v. Martens, after separating the American forms under Troschel's genus *Aperostoma*, divides this genus (as represented in India and the Malay Archipelago) into four very distinct groups, based on the shell characters. The differences that exist are not sufficient to found new subgenera, and I follow his grouping now because it is certainly an aid to the identification of the species.

1st Group. *Cycloti pterocycloidei*.

Shell of depressed form, widely umbilicate, with the peristome reflected, forming a more or less well-developed wing above.

Bm. 1953 30. *CYCLOTUS BOXALLI*, n. sp. (Plate XXXVI. figs. 4, 4 a.)

Shell dextral, discoid, very openly and perspectively umbilicated; sculpture a thick epidermis with fine lines of growth; colour rich dark madder-brown; spire papillate; apex slightly raised above the last whorl; suture deeply impressed; whorls 5, well rounded, regularly increasing; aperture oblique, circular; peristome double, inner very thin, simple, continuous on columellar margin with the outer lip, this last gradually expanding and reflected on the lower and outer

margin at right angles to the body-whorl, and at last forming a flat broad wing, with a shallow fold near the suture.

Size: maj. diam. 28·75, min. 21·25; alt. axis 6·5 millim.

Operculum shelly in front, multispiral, having the appearance of a strand of rope coiled on itself, thin, flat, and horny on the inner side.

Hab. Molu Hills (*R. Hungerford*).

31. *CYCLOTUS TRUSANENSIS*, n. sp. (Plate XXXVI. figs. 5, 5a.)

Shell discoid, very widely umbilicated; all the whorls showing; sculpture a thick epidermis, with lines of growth; colour dark umber-brown, with a few small splashings of ochre; spire flatly depressed; apex scarcely rising above the last whorl; suture impressed; whorls 5, rounded, the last slightly descending; aperture circular, oblique; peristome double, inner simple, continuous, the outer slightly reflected, gradually expanding towards the margin, forming at the suture a small wing, which is attached to the penultimate whorl.

Size (of shell drawn): maj. diam. 18·5, min. 15·0; alt. axis 4·5; diam. aperture 7·80 millim.

Size (largest in collection): maj. diam. 22·5, min. 17·5; alt. axis 5·0; diam. aperture 9·0 millim.

Operculum shelly in front, flatly concave, with a small central circular depression, horny at back, surface flat.

Hab. Trusan Island (*A. Everett*).

This shell without its operculum might on a casual examination be referred to *Pterocyclos tenuilabiatus*, Metcalfe; but it may be distinguished from this latter by its closer umbilication and by the last whorl not descending so rapidly. It is remarkable to find two shells so very similar, and yet showing so wide a difference in the form of the operculum.

Pterocyclos tenuilabiatus is quite plain in coloration, while *Cyclotus trusanensis* shows bands of pale zigzag markings.

2nd Group. *Cycloti marmorati*.

Shell more or less turbinate, narrowly umbilicate, smooth, with marbled or fine zigzag markings.

Cyclotus amboinensis, Pfr.

Cyclophorus amboinensis, Pfr. P. Z. S. 1852, p. 144.

Cyclotus amboinensis, von Martens, Preuss. Exped. Ost-Asien, p. 121, pl. ii. figs. 4, 5.

Hab. Borneo. In Cuming collection, Brit. Mus.

This locality is doubtful; von Martens gives it from the Moluccas only, Amboina, Buru, &c.

3rd Group. *Cycloti suturales*.

Turbinate shells, openly umbilicate, plain in coloration, the last whorl slightly separated from the antepenultimate. Peristome simple, not reflected at all.

Cyclotus ptychoraphe, v. Martens.

Cyclotus ptychoraphe, v. Martens, Monatsber. d. Berlin. Akad. 1864, p. 117; Preuss. Exped. Ost-Asien, Die Landschnecken, p. 125, pl. ii. fig. 11 (1867).

Hab. Singkawang, Borneo; rare (v. Martens).

32. *CYCLOTUS LINITUS*, n. sp. (Plate XXXVI. fig. 3.)

Shell globosely turbinate, rather openly umbilicated; sculpture the first two apical whorls show distinct liration, 14 on the whorl, it thence is suddenly smooth and transversely striated; spire conic; apex papillate; suture deep; whorls 4, very rounded; aperture circular, subvertical; peristome simple, not thickened.

Size: maj. diam. 7.25; alt. axis 3.5 millim.

Operculum shelly in front, multispiral.

Hab. Busan Hills (*A. Everett*).

There are a large number of specimens in the collection, all covered with a black substance completely concealing the form of the shell; a state so often seen in certain species of *Alycaeus*, and as I have observed in those that have a burrowing habit. In this *Cyclotus* the shells are more completely coated than usual. The drawing is from one cleaned after a soaking in warm water.

4th Group. *Cycloti liratuli*.

Shell turbinate, with high spire, with spiral ribbing; aperture simple, not reflected.

33. *CYCLOTUS TRILIRATUS*.

Cyclostoma triliratum, Mart. u. Chem. Conch.-Cab. ed. ii. p. 363, pl. xlvii. figs. 8-10.

Cyclophorus triliratus, Reeve, Conch. Icon. pl. xix. fig. 96 (1861).

Cyclostoma quadriflosum, Benson, Ann. & Mag. Nat. Hist. ser. 2, x. p. 270 (1852).

In Dr. Hungerford's collection.

Cyclotus angulatus, v. Martens.

Cyclotus angulatus, v. Martens, Jahrb. d. deutsch. Malakozool. Gesell. 1874, p. 56.

JERDONIA, Blauf.

34. *JERDONIA? BORNEENSIS*, n. sp. (Plate XXXVI. figs. 6, 6 a.)

Shell dextral, pyramidal, turreted, strongly lirate, openly umbilicated; sculpture 5 strong longitudinal ribs on the whorl, the two below and the three above separated by a wider interval; two strong closely placed longitudinal ribs run with the angulate margin of the umbilicus, and one fine rib within it; colour pale greenish horny; spire high; apex rather pointed; suture angulately open; whorls 6, angularly convex; aperture oval, oblique, not double; peristome simple, with a marked sinuation or shallow notch on the lower margin; columellar margin rounded and slightly thickened.

Size: maj. diam. 2.7; alt. axis 2.3 millim.

Operculum horny, multispiral, black-brown, with a pale centre, with a central minute hollow showing dark upon it, like the bull's eye of a target.

Hab. Busan Hills (*A. Everett*).

I place this species in the genus *Jerdonia* with doubt, the operculum of the S. Indian shell *J. trochlea* being of a decidedly calcareous nature; but unless the animal differs in other respects, it is not desirable to create a new genus only on the single character of the operculum.

ALYCÆUS, Gray.

Alycæus hochstetteri, Pfr.

Alycæus hochstetteri, Pfr. Malak. Blätt. vii. p. 215, pl. iii. fig. 14 (1860).

Bm 35. *ALYCÆUS SPIRACELLUM*, Adams & Reeve. (Plate XXXVII. figs. 6, 6 a.)

Cyclostoma spiracellum, Adams & Reeve, Zool. Voy. Samarang, Moll. p. 56, pl. xiv. fig. 1 (1860).

This figure is not sufficiently good for the identification of the species, and I have therefore given an enlarged drawing taken from a typical specimen in the British Museum.

fm 36. *ALYCÆUS GALBANUS*, n. sp. (Plate XXXVII. figs. 1, 1 a.)

Shell dextral, pyramidal, closely umbilicated, the last whorl slightly constricted and swelling again towards the aperture; sculpture very fine irregular transverse striation, a few stronger costulate striæ near the sutural tube, smooth in front of this; colour pale yellowish sap-green, dark on the apex; spire high, conic; apex sharp; suture moderately impressed; sutural tube only 0·7 millim. in length, blunt; whorls 6, rather flat-sided; aperture circular; peristome double, the outer much expanded on the upper outer margin and forming a sharp nick on the columellar side; columellar margin rounded.

Size: maj. diam. 6·0; alt. axis 4·75 millim.

Hab. Niah Hills (*A. Everett*).

There are not many specimens of this pretty shell in the collection.

fm 37. *ALYCÆUS GLOBOSUS*, H. Adams. (Plate XXXVII. figs. 3, 3 a.)

Alycæus globosus, H. Adams, P. Z. S. 1870, p. 794.

Hab. Busan, near Sarawak.

Shell dextral, globosely pyramidal, narrowly umbilicated; sculpture very fine regular costulation, quite smooth from sutural tube to the aperture; colour on apex pale orange, the rest very pale white with a slight green tinge; spire conical, somewhat depressed; apex blunt; suture well impressed; the sutural tube short and club-like; whorls 4, sides very convex, the last but very slightly constricted; aperture circular; peristome double, the outer lip much expanded on the columellar margin, covering the umbilicus.

Size: maj. diam. 3·0; alt. axis 2·90 millim.

Hab. Sarawak proper and Busan Hills.

This is the Bornean representative of the Indian *Alycæus graphicus* and *A. otiphorus*; there is a large series in the collection.

I am informed by Mr. Edgar Smith that although the British Museum purchased all the types in Mr. Henry Adams's collection, this shell was not among them, and that the type is probably lost.

38. *ALYCÆUS HOSEI*, n. sp. (Plate XXXVII. fig. 2.)

Shell dextral, tubinately pyramidal, narrowly umbilicated; sculpture very fine close regular costulation, slightly better defined at the sutural tube, quite smooth thence to the aperture; colour very pale with a slight tint of sea-green; spire high; apex pointed; suture well impressed, the sutural tube fine and short; whorls $5\frac{1}{2}$, sides convex, the last with a slight contraction in front of the sutural tube; aperture circular; peristome sharply edged, the outer lip being much expanded and rising on the last whole but one and contracting again on the inner margin; columellar margin circular.

Size: maj. diam. 5.75; alt. axis 6.25 millim.

Hab. Busan Hills (*A. Everett*).

39. *ALYCÆUS EVERETTI*, n. sp. (Plate XXXVII. figs. 5, 5 a.)

Shell dextral, not depressedly tubinate, widely umbilicated; sculpture quite smooth above, close costulation at sutural tube, gradually decreasing to a few distant very minute striæ, fine close costulation within the umbilicus; colour whitish, apex pinkish brown; spire subconic; apex papillate; suture deep, the sutural tube 1.5 millim. in length, well developed; whorls 4, sides convex, the last slightly constricted near sutural tube, then swelling and descending towards the aperture; aperture oblique ovate, angulate above at inner upper margin of the peristome; peristome double, the outer expanded slightly and to its greatest extent on lower inner margin; columellar margin rounded.

Size: maj. diam. 5.0; alt. axis 2.5 millim.

Hab. Niah Hills (*A. Everett*).

Only one specimen of this species was found.

40. *ALYCÆUS SPECUS*, n. sp. (Plate XXXVII. figs. 4, 4 a.)

Shell dextral, globosely conical, narrowly umbilicated; sculpture fine rather distant ribbing, stronger at sutural tube and more distant anterior to it; colour bleached; spire conic; sides flat; apex blunt; suture impressed, the sutural tube moderately long, stout; whorls 4, rounded; aperture circular, angulate above near suture; peristome double, outer expanded; columellar margin rounded.

Size: maj. diam. 3.25; alt. axis 1.75 millim.

Hab. In limestone caves at Jambusan (*A. Everett*).

I found four examples of this small species when looking over the cave-earth sent home by Mr. Everett; it has not yet been found living, but is doubtless abundant in suitable localities.

DIPLOMMATINA, Benson.

41. DIPLOMMATINA CONCINNA, H. Adams.

Diplommatina concinna, H. Adams, P. Z. S. 1872, p. 13, pl. iii. fig. 22.

This figure, though small, is, from the very peculiar and distinct form of the shell, sufficient for its identification, and I have therefore not given an enlarged drawing.

42. DIPLOMMATINA RUBICUNDA, v. Martens.

Paxillus rubicundus, v. Martens, Monatsber. d. Berlin. Akad. 1864, p. 119; Preuss. Exp. Ost-Asien, Die Landschnecken, p. 164, pl. iv. fig. 17 (1867).

Hab. Benkajang and Singkawang.

43. DIPLOMMATINA ADVERSA, H. & A. Ad. (Plate XXXVIII. fig. 3.)

Paxillus odversus, H. & A. Adams, Ann. & Mag. Nat. Hist. ser. 2, vii. p. 63 (1851).

No figure having ever been given of this species, I now give one from a specimen received from Mr. Henry Adams some years ago and in my collection.

44. DIPLOMMATINA BECCARII, Issel.

Paxillus beccarii, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 441, pl. vi. figs. 20-22 (1874).

45. DIPLOMMATINA ISSELI, n. sp. (Plate XXXVIII. figs. 5, 5 a.)

Shell sinistral, elongately fusiform, slightly rimate; sculpture very fine spiral liration, crossed by well-defined regular somewhat close costulation; colour sienna-brown; spire high, tapering rapidly; apex fine; suture well impressed; whorls 8, sides convex, the last the largest, not ascending, constriction (fig. 5 a) on side $\frac{1}{2}$ a whorl behind aperture, where position of operculum may be seen; aperture very oblique, oval; peristome double, not thickened, reflected slightly, with a thin callous on the last whorl; columellar margin with a blunt rounded tooth.

Size: maj. diam. 2.9; alt. axis 4.0 millim.

Hab. Sarawak proper and Busau Hills (*A. Everett*).

The species occurred also among the shells from the cave deposits.

This is a very peculiar form, and much more worthy of subgeneric distinction than *Paxillus*, which is only a reversed *Diplommatina*.

46. DIPLOMMATINA BUSANENSIS, n. sp. (Plate XXXVII. fig. 4.)

Shell sinistral, ovately fusiform, somewhat short; sculpture fine longitudinal striation, crossed by distant regular well-marked constulation; colour orange-brown, dark madder-brown on apex; spire turreted; apex pointed; suture deep; whorls 6, sides very convex,

penultimate ample, the antepenultimate the largest; aperture ovate, subvertical; peristome double, continuous, rounded on the outer margin, angular on the columellar side; columellar margin oblique outwards, tooth small and blunt.

Size: maj. diam. 2.0; alt. axis 3.4 millim.

Hab. Busan Hills (*A. Everett*).

Only two specimens found in the collection. It belongs to the group of sinistral *Diplommatina* (*Palaina*).

47. *DIPLOMMATINA NIAHENSIS*, n. sp. (Plate XXXVIII. figs. 6, 6 a.)

Shell dextral, ovate, fusiform, solidly built; sculpture smooth, with fine costulation on the 4 apical whorls, but showing fine, distant and indistinct on the penultimate and body-whorl; colour dark amber, very ruddy at the apex; spire attenuate, sides flat; apex sharp; suture well marked; whorls 8, rapidly increasing after the fifth, antepenultimate the largest, the last rising near the aperture on the penultimate whorl, the constriction being on this last just behind the aperture on right side; aperture large and broadly ovate, perpendicular; peristome double, much thickened and developed, sharply angulate below and at the upper outer margin, which is sinuate as viewed from the right side; columellar tooth very large and strong, the margin perpendicular.

Size: maj. diam. 2.7; alt. axis 4.4 millim.

Hab. Niah Hills (*A. Everett*).

This is a very beautiful species of this genus and of a very remarkable form, altogether different from any with which I am acquainted.

48. *DIPLOMMATINA SPINOSA*, n. sp. (Plate XXXVIII. fig. 1.)

Shell dextral, elongately turreted; sculpture worn off; colour completely faded; spire high, attenuate; apex pointed; suture moderate; whorls 9, the penultimate and antepenultimate equal, last ascending, rounded above, slightly angulate below, where in the perfect shell numerous spines were developed, the circular bases showing where they once projected; aperture broadly ovate, suboblique; peristome double; outer lip rises halfway up the penultimate whorl, covering it in front; columellar margin straight, with well-developed blunt tooth.

Size: maj. diam. 2.9; alt. axis 6.0; diam. ap. 2.4 millim.

Hab. Cave exploration A (*A. Everett*).

This species has not yet been found living, and when it has it will be an interesting discovery, more particularly to see what the form of its spine is; but, judging from what we now know of those that ornament *Opisthostoma grandi-spinosum*, they are probably similar and curved and trough-like; the perfect shell must be a lovely form.

49. *DIPLOMMATINA RUBRA*, n. sp. (Plate XXXVIII. fig. 7.)

Shell sinistral, rimate, fusiform, elongate, turreted; sculpture minute, close, slightly raised transverse costulation; colour rich

ruddy amber; spire high, sides slightly convex; apex jointed; suture moderately impressed; whorls 7, sides flat on apical, convex below, the last rising on the penultimate, antepenultimate the largest; aperture broadly oval, suboblique; peristome double, the outer thin and expanded; columellar tooth small.

Size: maj. diam. 3·3; alt. axis 6·4 millim.

Hab. Niah Hills (*A. Everett*).

Five specimens occurred in the collection. This is a finely developed species and one of the largest from Borneo.

OPISTHOSTOMA, Blyth.

50. *OPISTHOSTOMA GRANDI-SPINOSUM*, n. sp. (Plate XXXVIII. figs. 2, 2 *a*.)

Shell dextral, depressedly pyramidal, thin, glassy, transparent; sculpture smooth, with lines of growth; the periphery, the upper whorls, and the extended free portion of the last whorl are set with curved, white, glassy spines, the largest nearest to the aperture; each spine rises from a fine transverse rib, above and below the whorl, these nearly meeting, a gutter-like fold is produced which rises at right angles with the whorl; colour pale amber or sienna-brown, with a golden lustre; spire moderately high, conic, sides convex; apex rather sharp; suture impressed; whorls 5 to the constriction, whence it leaves the adjacent whorl, and turns sharply at right angles upwards in a diagonal direction to the apex of the shell, lying closely to the spire, reaching the apex it takes another sharp turn to the aperture, which thus rises high above and clear of the apex; aperture widely circular, trumpet-shaped; peristome continuous, thin, simple.

Size: maj. diam. 2·4; alt. axis 1·9; length of longest spine 1 millim.

Hab. Niah Hills (*A. Everett*).

This is certainly the most beautiful form of a very beautiful and minute genus of land-shells, the finest thing that has been discovered for a long time. It is almost impossible to describe the delicate structure of the spines that cover it, rising from the golden-coloured whorls.

51. *OPISTHOSTOMA DECRESPIGNYI*, H. Adams.

Plectostoma decrespignyi, H. Adams, *Ann. & Mag. Nat. Hist.* ser. 3, xv. p. 177 (1865); Issel, *Moll. Born. Ann. Mus. Civ. Genova*, vi. p. 439, pl. vi. figs. 13, 15 (1874).

RAPHAULUS, Pfeiff.

52. *RAPHAULUS BOMBYCINUS*, Pfr.

Anaulus bombycinus, Pfr. *P. Z. S.* 1855, p. 105, pl. xxxii. fig. 10, male; *id.* *Novit. Conch.* i. pl. xvii. figs. 12, 13; H. & A. Adams, *Gen. Moll.* ii. p. 286, pl. lxxxiii. fig. 3 (1858).

Hab. Limestone caves (*A. Everett*).

53. *RAPHAULUS PFEIFFERI*, Issel.

Raphaulus pfeifferi, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 443, pl. vii. figs. 4-6 (1874).

Hab. In cave-earth (*A. Everett*).

One specimen only.

PUPINA, Vign.

54. *PUPINA DORIÆ*, n. sp. (Plate XXXIX. figs. 2, 2 a, 2 b.)

Shell ovately globose, solid, glassy; sculpture microscopic transverse striæ; colour pearly white; spire moderately high, sides rounded; apex very blunt; suture linear; whorls $4\frac{1}{2}$, flatly convex; aperture circular, vertical; peristome solid, sinuate on upper outer margin, when viewed from the side, with a slot at the suture; the columellar margin broad, cut off from the peristome by a well-marked sinus.

Size: maj. diam. 2·7; alt. axis 4·3 millim.

Hab. Busan Hills (*A. Everett*).

Only one specimen of this very distinct species was found. It is noticeable for its small size and white colour. I have named it after Signor Doria.

55. *PUPINA HOSEI*, n. sp. (Plate XXXIX. figs. 1, 1 a.)

Shell globosely oval, solid, glassy, transparent; sculpture a slight indication of transverse striation under the glassy surface; colour burnt-sienna; spire moderately high; apex blunt; suture very shallow; whorls $5\frac{1}{2}$, sides rather flat; the last somewhat swollen; aperture circular, perpendicular; peristome indistinctly double, very thickened, as well as the columellar margin, this is double, cut off from the peristome by a deep notch; another deep notch near sutural margin.

Size: maj. diam. 3·0; alt. axis 6·9 millim.

Hab. Busan Hills (*A. Everett*).

The collection only contains four specimens of this species, but all in good preservation. It also occurred in the cave explorations made by Mr. Everett.

56. *PUPINA EVANSI*, n. sp. (Plate XXXIX. figs. 3, 3 a.)

Shell globosely oval, polished, solid; sculpture very minute, transverse, distant striation, probably more marked in the living state; colour quite faded, a slight tinge of brown remaining, so that it was probably of a bright polished brown; spire high, sides convex; apex blunt; suture very shallow; whorls 5, sides convex; aperture circular, perpendicular; peristome thickened, discontinuous, not sinuate on margin, a very narrow slot at the columellar margin, another near suture.

Size: maj. diam. 4·2; alt. axis 6·6 millim.

Hab. From deposit in Cave A (*A. Everett*).

Only two specimens were found by me in the cave-earth; it is quite distinct from the two other Pupinas discovered by Mr. Everett.

I have much pleasure in naming it after Mr. John Evans, who did so much to promote the exploration of the Bornean caverns.

PUPINELLA, Gray.

Pupinella borneensis, Pfr.

Pupinella borneensis, Pfr. P. Z. S. 1861, p. 389, pl. xxxvii. fig. 1.

MEGALOMASTOMA, Guilding.

Megalomastoma doriæ, Issel.

Megalomastoma doriæ, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 430, pl. vi. figs. 18, 19 (1874).

Hab. Sarawak (*Doria and Beccari*). Five examples.

57. MEGALOMASTOMA ANOSTOMA, Benson.

Cyclostoma anostoma, Benson, Ann. & Mag. Nat. Hist. ser. 2, x. p. 269 (1852).

Megalomastoma anostoma, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 429, pl. vi. figs. 16, 17 (1874).

Cyclostoma sectilabrum, Mart. u. Chemn. Conch.-Cab. ed. ii. p. 377, pl. xlvii. figs. 11, 12.

Cyclostoma leferi, Morelet, Journ. de Conch. 1861, p. 176.

Megalomastoma lowei, Sowerby, Thesaur. Conch. iii. pl. cclxiii. fig. 1.

Hab. Trusan and Niah Hills (*Everett*).

HELICINA, Lamarck.

58. HELICINA USUKANENSIS, n. sp. (Plate XXXIX. fig. 7.)

Shell dextral, lenticular, solid, convex below; sculpture nearly smooth, fine lines of growth, crossed by irregular diagonal striation; colour pale ruddy madder-brown, pale straw-colour below and on periphery, an indistinct band seen inside the aperture; spire depressedly pyramidal, sides flatly convex; apex blunt; suture linear; whorls 4, regularly increasing, sides very flat, the last bluntly carinate, with an obsolete band below; aperture acute, white, slightly reflected; columellar margin short, thickened, the callous short and semicircular.

Size: maj. diam. 7·10; alt. axis 3·75 millim.

Hab. Usukan Island, Borneo (*A. Everett*).

This species approaches very near to *H. martensi* in form of the columellar margin, but differs in colour and the form of the carinate periphery, as also in its flatter-sided spire.

Helicina borneensis, v. Martens.

Helicina borneensis, v. Martens, Monatsber. d. Berlin. Akad. 1864, p. 120; Reeve, Conch. Icon. pl. xxx. fig. 267 (1873).

Hab. Singkawang (*v. Martens*).

Helicina crossei, Semper.

Hab. Palawan. In Brit. Mus.

Helicina martensi, Issel.

Helicina citrina? (Pfr.), var., v. Martens, Malak. Blätt. 1873, p. 161.

Helicina martensi, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 444, pl. vi. figs. 23-25 (1874).

GEORISSA, Blauf.

372 1487 59. GEORISSA HOSEI, n. sp. (Plate XXXIX. fig. 11.)

Shell elongately conoid, rather solid, imperforate; sculpture ill-defined spiral liration; colour ruddy ochraceous; spire high; apex blunt; suture impressed; whorls 4, sides flat, angulate above and below on the periphery, the median side of each whorl being parallel with the axis of the shell, more rounded on the last whorl; aperture oval, oblique; peristome simple, somewhat thickened above; columellar margin straight.

Size: maj. diam. 1.5; alt. axis 1.9 millim.

Hab. Borneo (*C. Hose*, 1889). In Brit. Mus. collection.

The square form of the second whorl is peculiar, and distinguishes it from the other Bornean species. Only two specimens are in the collection. The exact locality I have not yet ascertained; it occurred among a small collection of shells sent to the British Museum by Mr. Hose in May 1889, which Mr. Edgar Smith has kindly let me figure and describe.

377 1453 60. GEORISSA WILLIAMSII, n. sp. (Plate XXXIX. fig. 10.)

Shell elongately ovate, solid; sculpture indistinct spiral liration, showing strongest on the apical whorl; colour ruddy ochraceous; spire high; apex blunt, smooth; suture well impressed; whorls $4\frac{1}{2}$, convex, the last very ample; aperture oval, oblique; peristome simple, sharp-edged; columellar margin straight.

Size: maj. diam. 1.7; alt. axis 2.30 millim.

Hab. Borneo (*C. Hose*). In Brit. Mus. collection.

Only one example occurred among four specimens of *Georissæ* sent by Mr. Hose to the British Museum, one being *G. niahensis*, and two others of a new species and very distinct form, which I have named *G. hosei*. I have named this species after Dr. Williams, who served with Rajah Brooke on the first occupation of the country.

372 1453 61. GEORISSA NIAHENSIS, n. sp. (Plate XXXIX. fig. 8.)

Shell elongately conoid, solid, imperforate; sculpture a very indistinct, ill-defined spiral liration, about 20 on the penultimate whorl, upon a rough surface crossed by transverse lines of growth; colour ruddy ochre; spire high; apex pointed, finely papillate, minutely liriate; suture impressed; whorls $4\frac{1}{2}$, convex; aperture oval, oblique; peristome simple, acute below; columellar margin straight.

Size: maj. diam. 2.3; alt. axis 3.6 millim.

Hab. Niah Hills (*A. Everett*).

This is a large species of this genus, and its sculpture is a noticeable character, from the lirate ribbing being so wanting in the sharp definition it generally presents in other species.

62. *GEORISSA HUNGERFORDI*, n. sp. (Plate XXXIX. fig. 9.)

Shell globose conical, solid, imperforate; sculpture spirally lirate, about 15 ribs on the last whorl, all sharply defined, but becoming ill-defined towards the apex, which is quite smooth; spire conical; apex papillate; suture well impressed; whorls 4, very convex; aperture semi-ovate, subvertical; peristome simple, outer margin rounded, straight on the columellar side.

Size: maj. diam. 1.2; alt. axis 1.38 millim.

Hab. Borneo (*Sir H. Low*). In collection of Dr. Hungerford.

TRUNCATELLA, Risso.

63. *TRUNCATELLA MARGINATA*, Küster.

Truncatella marginata, Mart. u. Chemn. Conch.-Cab. ed. ii. pl. ii. figs. 24-26 (1855).

64. *TRUNCATELLA AURANTIA*, Gould.

Truncatella aurantia, Gould, Exped. Shells, p. 39.

Hab. Maugsi, near Borneo.

HYDROCENA, Parreyss.

65. *Hydrocena cornea*, Pfr.

Hydrocena cornea, Pfr. P. Z. S. 1854, p. 306.

Not *Assimineia (Optediceros) cornea*, Leith, Journ. Bombay Br. R. As. Soc. v. p. 145 (1853).

OMPHALOTROPSIS, Pfr.

66. *Omphalotropsis glabrata*, Pfr.

Hydrocena (Omphalotropsis) glabrata, Pfr. P. Z. S. 1854, p. 308.

Hab. Borneo (*Pfr.*).

67. *Omphalotropsis radiata*, Pfr.

Hydrocena (Omphalotropsis) radiata, Pfr. P. Z. S. 1854, p. 308.

Hab. Borneo (*Pfr.*).

68. *Omphalotropsis carinata*, Lea.

Assimineia carinata, Lea, Proc. Acad. Nat. Sci. Philad. vii. p. 111 (1857); Ann. Mus. Civ. Genova, p. 447, pl. vii. figs. 7-9.

Hab. Siam (*Lea*); Borneo (*Geale, coll. Mousson*).

Subgenus OPTEDICEROS, Blanford.

69. *Omphalotropsis paladilhi*, Issel.

Omphalotropsis paladilhi, Issel, Moll. Born. Ann. Mus. Civ. Genova, vi. p. 448, pl. vii. figs. 10-12 (1874).

Hab. Sarawak (*Doria and Beccari*).

70. OMPHALOTROPSIS BANKAENSIS, MOUSSON.

Hab. BORNEO. In collection of Dr. Hungerford.

EXPLANATION OF THE PLATES.

PLATE XXXV.

- Figs. 1, 1a, 1b. *Cyclophorus niahensis*, n. sp., nat. size, p. 334.
 2, 2a. *Pterocyclos cucullus*, n. sp., $\times 2.5$ and 1.65 , p. 340.
 3, 3a. — *niahensis*, n. sp., $\times 2.5$, p. 340.
 4, 4a. — *tenuilabiatus*, $\times 2.5$ and 1.65 , p. 339.
 5, 5a, 5b. *Opisthoporus pterocycloides*, $\times 2.5$ and 1.65 , p. 341.

PLATE XXXVI.

- Figs. 1, 1a. *Rhiostoma cavernæ*, n. sp., $\times 2.5$, p. 342.
 2, 2a. — *gwendolenæ*, n. sp., $\times 2.5$, p. 342.
 3. *Cyclotus linitus*, n. sp., $\times 4$, p. 345.
 4. — *boxalli*, n. sp., nat. size, p. 343.
 4a. — —, aperture, $\times 2.5$, p. 343.
 5, 5a. — *trusanensis*, n. sp., $\times 2.5$, p. 344.
 6, 6a. *Jerdonia? borneensis*, n. sp., p. 345.

PLATE XXXVII.

- Figs. 1, 1a. *Alycæus galbanus*, n. sp., $\times 4$, p. 346.
 2. — *hosei*, n. sp., $\times 4$, p. 347.
 3, 3a. — *globosus*, H. Adams, $\times 7$ and 12 , p. 346.
 4, 4a. — *specus*, n. sp., $\times 7$, p. 347.
 5, 5a. — *everetti*, n. sp., $\times 4$, p. 347.
 6, 6a. — *spiracellum*, Adams and Reeve, $\times 7$, p. 346.

PLATE XXXVIII.

- Figs. 1. *Diplommatina spinosa*, n. sp., $\times 7$, p. 349.
 2, 2a. *Opisthostoma grandi-spinosum*, n. sp., $\times 12$, p. 350.
 3. *Diplommatina adversa*, $\times 7$, p. 348.
 4. — *lusanensis*, n. sp., $\times 7$, p. 348.
 5, 5a. — *isseli*, n. sp., $\times 7$, p. 348.
 6, 6a. — *niahensis*, n. sp., $\times 7$, p. 349.
 7. — *rubra*, n. sp., $\times 7$, p. 349.

PLATE XXXIX.

- Figs. 1, 1a. *Pupina hosei*, n. sp., $\times 4$, p. 351.
 2, 2b. — *doriæ*, n. sp., $\times 7$, p. 351.
 2a. — —, n. sp., $\times 4$, p. 351.
 3, 3a. — *evansi*, n. sp., p. 351.
 4. *Lagocheilus keppeli*, n. sp., $\times 2.5$, p. 338.
 5. — *dido*, n. sp., $\times 2.5$, p. 338.
 6, 6a. — *mundayanus*, n. sp., $\times 4$; aperture, $\times 7$, p. 338.
 6b. — —, operculum, $\times 12$, p. 338.
 7. *Helicina usukanensis*, n. sp., $\times 7$, p. 352.
 8. *Georissa niahensis*, n. sp., $\times 7$, p. 353.
 9. — *hungerfordi*, n. sp., $\times 12$, p. 354.
 10. — *williamsi*, n. sp., $\times 12$, p. 353.
 11. — *hosei*, n. sp., $\times 12$, p. 353.